

Fig. 2

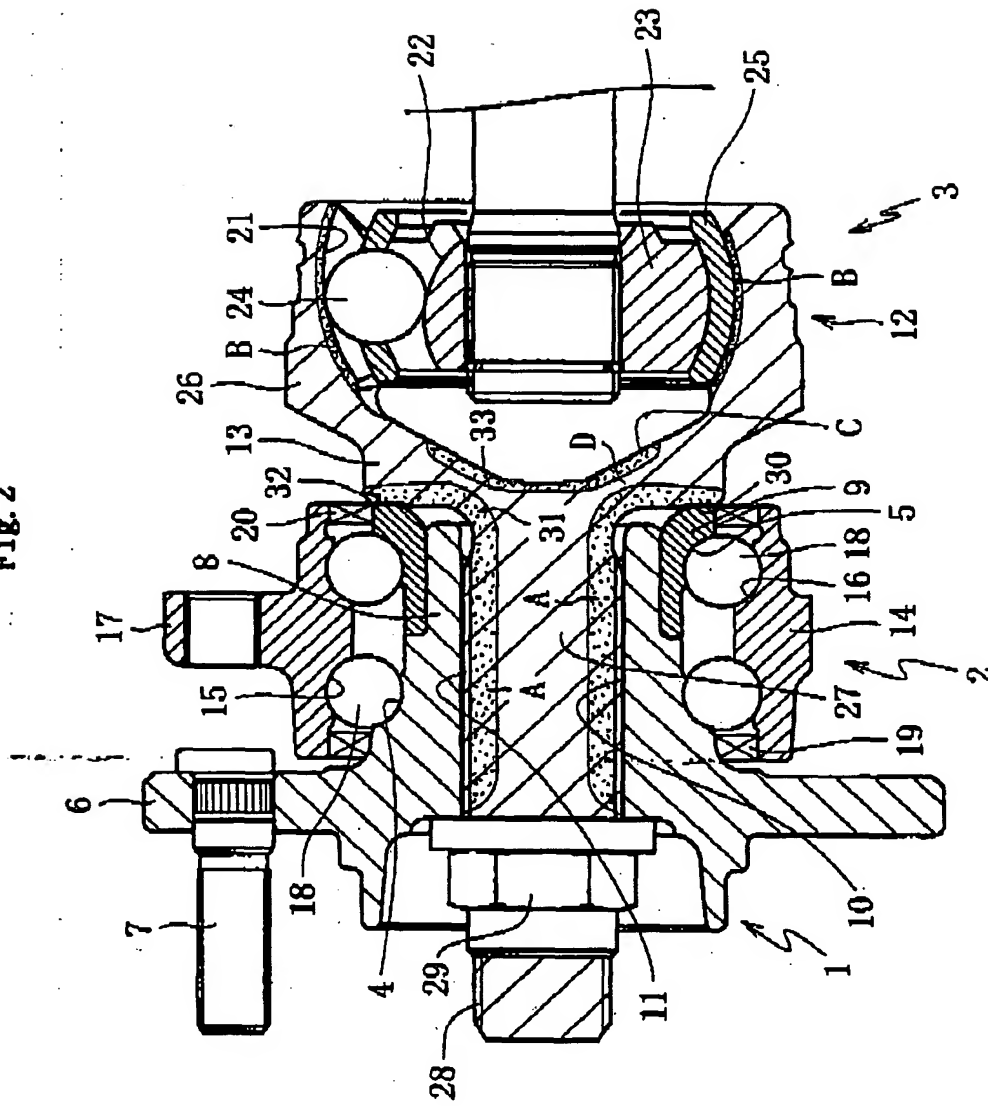


Fig. 3

	Static torsion strength	Surface hardness (Hv)		Hardness effective depth (mm)	
		Base portion	Unhardened portion	Mouth bottom portion	
Conventional product	Reference	672/1.8	230		-
Example a	○	670/1.8	230		703/0.8
Example b	⊙	670/1.8	230		703/1.3
Example c	⊙	670/1.9	230		703/2.6
Example d	○	668/1.8	230		703/3.9
Example e	×	595/1.0	230		701/4.5

Cross: Crack occurred. Lower than conventional one.

Circle: Better than conventional one.

Double circle: Far better than conventional one.

Fig. 4

Heating time	Ratio of step : m/n=1.5		Ratio of step : m/n=1.8		Ratio of step : m/n=2.0	
	Hardness/depth Hv/mm	Rate of crack occurrence at shoulder portion(%)	Hardness/depth Hv/mm	Rate of crack occurrence at shoulder portion(%)	Hardness/depth Hv/mm	Rate of crack occurrence at shoulder portion(%)
Short ↓ Long	665/2.5	0%	665/2.4	0%	665/2.4	0%
	671/2.9	0%	671/2.9	0%	671/2.8	0%
	662/3.0	0%	662/3.2	0%	662/3.0	0%
	660/3.5	0%	660/3.6	0%	660/3.1	61%
	660/4.2	0%	660/3.9	12%	660/3.1	88%

A cross-sectional view of a mechanical assembly, likely a valve or a similar component. The assembly consists of a main body (11) with a central passage (13) and a flange (26) at the top. A plug (27) is inserted into the passage, and a seal (28) is located at the bottom of the plug. The plug has a central passage (31) and a flange (30) at the top. The seal (28) is located at the bottom of the plug. The assembly is shown in a cross-sectional view with various parts labeled with numbers and letters.

